

Track routing

SO-02-0790

Synclavier track routing

Each track of the current sequence can be routed independently to your mixing console via the Multichannel Distributor.

Multichannel Distributor

The Multichannel Distributor allows you to route each track of the sequencer to a separate mixer channel for independent processing with equalizers or other signal processing equipment. Thus, a final equalized mix of a multitrack sequence can be made directly from the sequencer.

Each multichannel unit housed in your computer control unit has 16 separate outputs, numbered 1 through 16. If you have purchased the multichannel option with eight channels, only the first 8 outputs, numbered 1 through 8, are active. If you have purchased the option with 16 channels, all 16 outputs are active.

If you have purchased the option with more than 16 channels, you have two multichannel control panels on your computer control unit. The unit labeled group 1 corresponds to outputs 1 through 16. The one labeled group 2 corresponds to outputs 17 through 32.

When the system is first turned on, each Multichannel Distributor output is automatically tested. A slight buzz is emitted from each output as it is tested.

Default routings

By default, each track is routed to the output channel with the same number. That is, track 1 is routed to the output labeled 1, track 2 to output 2 and so on. Left and right outputs are routed to the same output. If you have a Synclavier keyboard, the keyboard timbre is routed to output 1.

You can change these default routings from the Multichannel Display or, if you have a keyboard, from the keyboard control panel.

The track routings of a sequence are automatically saved when the sequence is written to disk. When a sequence is called up, the last track routing used with that sequence is automatically re-activated.

Changing track routings from the keyboard

If you have a Synclavier keyboard, you can change the routings for any track by using the TRACK ROUTING button on the keyboard control panel.

1. Press and hold the TRACK ROUTING button.
2. Press the desired TRACK SELECT button.
3. Release both buttons.

The display window shows the current routing for the selected track.

4. Turn the control knob to change the track routing.

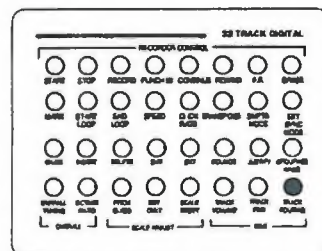
You can also change the routing for the keyboard by using the TRACK ROUTING button on the keyboard control panel.

1. Press and hold the TRACK ROUTING button.
2. Press any note on the keyboard.
3. Release the button and the key.

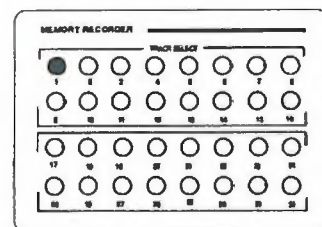
The display window shows the current routing for the keyboard.

4. Turn the control knob to change the routing.

If you have a split keyboard setting, press a key in the upper range to route the upper timbre and a key in the lower range to route the lower timbre.



TRACK ROUTING
panel 2



TRACK SELECT
panel 3

Synclavier track routing (con't)

Changing track routings from the Multichannel Display

You can assign any of the 200 sequencer tracks to any one of the multichannel outputs from the Multichannel Display.

- 1. Select the Multichannel Display from the Main Menu.
The Multichannel Display appears with the first 32 track numbers of the current sequence, along with the names of their timbres and their default routings, listed in two columns.
- 2. Move the cursor to the output routing you want to change.
- 3. Type in the new output number, or toggle through the selections.

Several tracks may be routed to the same output of the Multichannel Distributor without degrading the signal-to-noise ratio. However, when routing several tracks to a single channel, the signal levels may become overloaded, especially if each track contains many notes. Even single notes of certain timbres may overload Multichannel Distributor outputs.

You can eliminate any overloading that occurs by lowering the keyboard and/or track volume(s) (see below).

	Instrument Name	Left	Right	Poly
KBD	RHODES	1	1	1
1	ELECTRIC KIT	2	2	1
2	PHASED BASS	3	3	1
3	Music cues	*1*	*1*	
4	Volceover	*2*	*2*	
5	Effects 1	*3*	*3*	
6	Effects 2	*4*	*4*	
7	Effects 3	*5*	*5*	
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

MULTICHANNEL ROUTING DISPLAY

- 1. Move cursor with arrow keys
- 2. Assign new track numbers and routings
- 3. Press space bar to increment values
- 4. M/C Outputs: 32 Poly Bins: 1 DTD Outputs: 8

21			
22			
23			
24			
L1	Vocals-Bob	*1*	*1*
L2	Vocals-Lynn	*2*	*2*
L3	Volceover	*3*	*3*
L4	Foley 1	*4*	*4*
L5	Foley 2	*5*	*5*
L6		*6*	*6*
L7		*7*	*7*
L8		*8*	*8*

Current Catalog: W0:

Routing stereo tracks

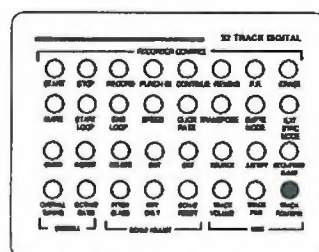
Tracks and keyboard timbres using stereo effects generate both a left and a right output signal. To preserve the stereo image, they must be routed to two outputs of the Multichannel Distributor, which then must be panned left and right at the console.

When setting up multichannel assignments for stereo timbres, route the left and right signal of each stereo track to adjacent multichannel outputs and mixing console inputs. Remember to pan the assigned channels fully left and right on the mixing console to maintain the stereo effects assigned in the Synclavier.

To route tracks with stereo timbres:

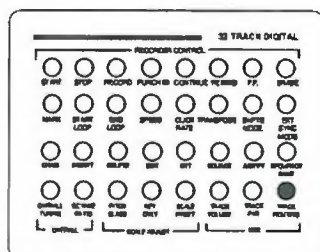
1. Press and hold the TRACK ROUTING button.
2. Press the TRACK SELECT button or a note on the keyboard to select the track or timbre to be routed.
3. Release both buttons.
4. Turn the control knob to route the left output signal to the selected Multichannel Distributor output.
- The right output signal is routed to the same output.
5. Press and hold the TRACK ROUTING button.
6. Use the control knob to assign the right output signal to a different Multichannel Distributor output.

The left output signal remains assigned to its previously selected output.

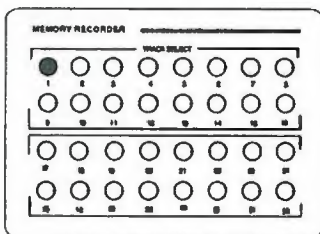


TRACK ROUTING
panel 2

Synclavier track routing (con't)



TRACK ROUTING
panel 2



TRACK SELECT
panel 3

Adjusting the volume from the keyboard control panel

To adjust the track volume:

1. Press and hold the TRACK VOLUME button while you press the desired TRACK SELECT button.

The display window shows

TRK [number] VOL 100.0

2. Turn the control knob to adjust the track volume from 0.0 to 100.0
3. Press STOP.

The track volume is adjusted.

The track volume for each track is stored with the sequence.

To adjust the keyboard volume:

1. Press and hold the TRACK VOLUME button while you play a note on the keyboard.

The display window shows

KEYBRD VOL: 100.0

2. Turn the control knob to adjust the keyboard volume from 0.0 to 100.0
3. Press STOP.

The track volume is adjusted.

With a split keyboard setting, you can adjust the volume of each half of the keyboard. Any track recorded with a split keyboard uses the lower keyboard setting as the track volume.

Adjusting track volume from the Sequence Editor

1. Select the Sequence Editor from the Main Menu.
2. Click on the Track Volume command.
The Track Volume dialog appears in the Dialog panel.
3. Solo the desired tracks by clicking on the appropriate numbers in the Display panel.
4. Click the SET VOLUME button in the lower left corner of the Dialog panel.

Complete instructions for scaling the track volume are in "Editing from the Sequence Editor" in the *Sequence Editing* manual.

Direct-to-Disk track and cueлист routing

You can route Direct-to-Disk tracks and cuelists (sequence tracks containing cues) to Direct-to-Disk outputs. You can also receive input from four different sources.

Routing to outputs

All recorded material on Direct-to-Disk tracks can be routed to Direct-to-Disk outputs for playback.

Direct-to-Disk tracks can be routed to Direct-to-Disk outputs from the Audio Event Editor's Project Manager panel. Cuelists can be routed to Direct-to-Disk outputs from the Audio Event Editor's Event List Editor panel.

Both Direct-to-Disk tracks and cuelists can also be routed from the Multichannel Display. The routing assignments appear enclosed in asterisks (*).

The number of available Direct-to-Disk outputs depends on the number of Direct-to-Disk voices in your system. More voices can be added.

Cueлист routing assignments are saved with the sequence. Direct-to-Disk track routing assignments are saved with the project. When you recall a project or sequence, the routing information saved with each is recalled.

Source	Make routing assignments from these locations
Direct-to-Disk tracks	Multichannel Display Project Manager panel Keyboard control panel
Cuelists	Multichannel Display Event List Editor panel Keyboard control panel
Notelists (Multichannel outputs)	Multichannel Display Keyboard control panel

Routing Direct-to-Disk tracks from the Multichannel Display

In the upper right corner of the Multichannel Display, the instructions list the number of Direct-to-Disk outputs (DTD Outputs) in your system. Direct-to-Disk tracks are listed in the lower right corner as L1-L16. They have a default routing of L1 to output 1, L2 to output 2, etc.

You can change this default routing.

1. Select the Multichannel Display from the Main Menu.

An asterisk (*) automatically appears on either side of a Direct-to-Disk output number. If no routing has been assigned, the default routing is shown.

2. Click the output number (left or right) for a given Direct-to-Disk track (L1-L16).
3. Type the number of the desired Direct-to-Disk output.
4. Press Return.

The track is assigned to the selected output. the left and right outputs always appear with the same number. This assignment also appears on the Track Display and the Audio Event Editor's Project Manager. Any track previously assigned to the selected output now appears on the display with no output assigned to it.

	Instrument Name	Left	Right	Poly	MULTICHANNEL ROUTING DISPLAY			
KBD								
1	VOICEOVER01	*1*	*1*		1. Move cursor with arrow keys			
2	VOICEOVER02	*2*	*2*		2. Assign new track numbers and routings			
3	OPENING	*3*	*3*		3. Press space bar to increment values			
4	MUSIC	*4*	*4*		4. M/C Outputs: 0 Poly Bins: 0			
5	THEME MUSIC	*5*	*5*		DTD Outputs: 8			
6	HERB MUSIC	*6*	*6*					
7	JINGLE01	*7*	*7*					
8	JINGLE02	*8*	*8*					
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

21			
22			
23			
24			
L1	Vocals-Bob	*1*	*1*
L2	Vocals-Lynn	*2*	*2*
L3	Voiceovers	*3*	*3*
L4	Foley1	*4*	*4*
L5	Foley2	*5*	*5*
L6	Effects1	*6*	*6*
L7	Effects2	*7*	*7*
L8		*8*	*8*

Current Catalog: W0:

Current Catalog: W0:

The Multichannel Display

Direct-to-Disk track and cueлист routing (con't)

Routing Direct-to-Disk tracks from the Audio Event Editor

The Audio Event Editor's Project Manager panel lists the Direct-to-Disk tracks in your system. The default routing is Track 1 to output 1, Track 2 to output 2, etc.

You route a track to an output using the Out column.

1. Display the Project Manager panel in the Show Project mode.
2. Click the output number (or space, if no number is shown) under the Out column for a Direct-to-Disk track.
3. Type the number of the desired Direct-to-Disk output.
4. Press Return.

The track is assigned to the selected output. Any track previously assigned to the selected output now appears on the display with no output assigned to it.

The Project Manager panel

PROJECT MANAGER												
Proj	1. Commercial	7/11/88	Start	0:00	End	5:23	Rate	50.0	Unlocked	M		
No.	Track Title	Status	Mode	Used	Input	dB	Out	No.	Vol	Pan	DDT	
1.	Announcer 1	Safe	Auto	5:00	STM	1A	1.0	1	100.0	-50	2	
2.	Announcer 2	Safe	Auto	4:23	STM	1B	1.0	2	100.0	+50		
3.	Announcer 3	Safe	Auto	4:10	OUT	2	1.0	3	100.0	-50		
4.	Music intro	Safe	Auto	1:23	TRK	3	1.0	4	100.0	+50		
5.	Music 1	Ready	Auto	1:23	DIG	1	1.0	5	100.0	-50		
6.	Music 2	Safe	Auto	0:45	STM	1.0	6	6	100.0	+50		
7.	Music Finale	Safe	Auto	1:54	STM	1.0	7	7	100.0	-50		
8.							8	8				
Show All ALL: Repro Input Auto Cue PB Safe Lock Unlock Erase Size: 8												

Routing cuelists from the Audio Event Editor

You can route cuelists to Direct-to-Disk outputs from the Event List Editor panel of the Audio Event Editor.

In the default setting, each cue in a cuelist is routed through the output(s) of the Direct-to-Disk track(s) from which the cue originated. For example, if a cue is recorded onto track one, and track one is routed to output 3, in the default setting the cue plays through output 3. Asterisks (**) at the top of the column mean that the cue is set to the default routing.

A cue is assigned a routing other than the default output.

1. Select the Audio Event Editor from the Main Menu.
2. Open the Event List Editor panel.

When 16 or fewer columns are displayed, the column numbers appear. When six or fewer columns are displayed, the column titles and routing appear.

3. Click the asterisks (**) at the top of the cue.

A box appears around the asterisks.

4. Type an output number.
5. Press Return.

The cue is routed to the selected output. All cues in the cue list play through this output.

EVENT LIST EDITOR									
00:01:00:00:00	<input type="checkbox"/>	1.	VoiceOver01	100.0	<input type="checkbox"/>	4.	Notes	100.0	
Event Start Time		Duration		End Time		SFX01	Duration		End Time
00:01:10:00:00							00:00:03		00:01:13:00
00:01:56:14:00						SFX02	00:00:15		00:02:11:04
00:02:15:00:00									
00:02:35:00:00		00:00:34							
00:02:56:00:00		VoiceOver01	00:00:23	00:02:49:23					
00:03:47:00:00		VoiceOver02		00:02:58:01		SFX03			
00:04:26:22:00						SFX04	00:01:02		00:03:58:00
00:06:35:00:00						SFX05	00:00:04		00:04:34:25
00:08:48:00:00							00:00:23		00:04:46:00
00:08:56:00:00						SFX06			
Set Display	Select Time	Set Edit	Select Tracks	Verify		Add Note	Add Ind Lp	Delete	Move
Comments	Format	Features				Add Note *	Add RTE	Events	Copy
									Play
									From
00:06:50:12									

The Event List Editor panel showing default routing

**Direct-to-Disk
track and cue list
routing (con't)**

Routing cue lists from the Multichannel Display

Cue lists appear in the Multichannel Display on the numbered sequencer tracks (1-200) to which they were assigned in the Audio Event Editor's Event List Editor panel. Their routing assignments appear with an asterisk (*) on either side of the output number. In the default setting, no routing assignment appears, and each cue in the cue list is routed through the output of the track(s) from which it originated.

You can assign a cue list to a specific Direct-to-Disk output.

- 1. Select the Multichannel Display from the Main Menu.

Cue lists appear on sequencer tracks with asterisks (*) on either side of the output number.

- 2. Click the left or right column for a given cue list output.
- 3. Type the number of the desired Direct-to-Disk output.
- 4. Press Return.

The cue list is assigned to the selected output. All cues in the cue list play through the selected output. Left and right columns are always assigned to the same output.

The Multichannel Display

Instrument Name		Left	Right	Poly	MULTICHANNEL ROUTING DISPLAY			
KBD					1. Move cursor with arrow keys 2. Assign new track numbers and routings 3. Press space bar to increment values 4. M/C Outputs: 0 Poly Bins: 0 DTD Outputs: 8			
1	VOICEOVER01	*1*	*1*					
2	VOICEOVER02	*2*	*2*					
3	OPENING	*3*	*3*					
4	MUSIC	*4*	*4*					
5	THEME MUSIC	*5*	*5*					
6	HERB MUSIC	*6*	*6*					
7	JINGLE01	*7*	*7*					
8	JINGLE02	*8*	*8*					
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

21			
22			
23			
24			
L1	Vocals-Bob	*1*	*1*
L2	Vocals-Lynn	*2*	*2*
L3	Voiceovers	*3*	*3*
L4	Foley1	*4*	*4*
L5	Foley2	*5*	*5*
L6	Effects1	*6*	*6*
L7	Effects2	*7*	*7*
L8		*8*	*8*

Current Catalog: W0:

Track splitting

Cues on a Direct-to-Disk track can be routed to different outputs by placing them on different sequencer tracks. You will hear no perceptible delay between cue triggers. A three-millisecond crossfade between outputs is performed immediately prior to the second cue trigger. During the crossfade, audio from the Direct-to-Disk track appears at both outputs.

When more than one cue is routed to a single output, a 30-millisecond interval between cues allows for track switching. Since you can only hear one track at a time through a single output, if the second cue overlaps the first cue, the first cue is cut off before the start of the second.

Playing back cues containing audio from more than one track

If a single cue placed in a cue list contains audio from more than one Direct-to-Disk track, audio from the first track is routed through the chosen output, and audio from subsequent tracks is routed through the next consecutively numbered outputs.

For example, if a cue using audio from Direct-to-Disk tracks 1, 3 and 5 is routed to output 4, track 1 is routed to output 4, and tracks 3 and 5 are routed to outputs 5 and 6. If you run out of outputs, the tracks which have no outputs do not play.

Any cue played from the Cue Directory or Cue Editor is routed through its default output. Any cue manually triggered from the Event List Editor panel is either routed through the assigned cue list output (with the above restrictions) or the default output.

Volume and gain

Controlling the final mixed volume

There are two Direct-to-Disk volume settings: cueist volume and output volume. The interaction of these settings can be varied to control the final mixed volume.

The volume setting in the Event List Editor panel is used to control the individual cueist volume. The volume setting on the Project Manager panel is used to control the volume of each Direct-to-Disk output. When a cue is triggered through a particular output, the cueist volume is multiplied by the output volume to get a final mixed volume.

$$\text{Mixed Volume} = \text{Cueist Volume} \times \text{Output Volume}$$

For example, if the cueist volume in the Event List Editor panel is set to 50%, and the output volume in the Project Manager panel is set to 50%, the final mixed volume is 25%.

$$\text{Mixed Volume} = 50\% \times 50\% = 25\%$$

Adjusting a cueist volume

You can control the playback volume of each cueist or notelist from the Event List Editor panel. Any value from 0.0 to 100.0 percent can be entered at the top of each cueist. The default setting is 100.0. All cues triggered in a particular cueist play back at the specified volume.

1. Display the Event List Editor panel.

When four or fewer tracks are displayed, the track volume appears to the right of the output number.

2. Click the volume setting.

A box encloses the volume number.

3. Type a volume setting.

4. Press Return.

The volume for the cueist is set.

Note: You cannot set the volume of an empty sequence track.

Adjusting output volume and pan

The Number (No.) column on the right side of the Track Display and the Show Project mode of the Project Manager panel lists each Direct-to-Disk output in numerical order.

You can adjust the volume and pan settings for each direct output.

1. Select the Track Display or the Audio Event Editor from the Main Menu.
2. If you selected the Audio Event Editor, display the Project Manager panel in the Show Project mode.
3. Click the volume or pan column for the selected output.
4. Enter the volume or pan setting.
5. Press Return.

The volume or pan is set.

Setting the input gain

All gain settings appear in decibels. Any integer value between -3 and +28 dB can be entered. A setting of zero is unity gain.

1. Display the Project Manager panel in the Show Project mode.
2. Click the dB column for the selected track.
3. Type the appropriate input gain value. Negative gain settings provide attenuation.
4. Press Return.

Selecting inputs

Setting the input source and channel

The Input column of the Show Project mode of the Project Manager is used to select the source of input and the input channel. The left column lists the input source; the right column lists the input channel associated with the selected source. See the opposite page for a list of the possible input sources and their channels.

1. Display the Project Manager panel in the Show Project mode.
2. Click and hold the left side of the Input column of the selected track.
3. Using the Spacebar, step through the selections until you reach the desired input source.

The track is now set to receive input from the selected source.

5. Click the right side of the Input column of the selected track.
6. Step through the selections until you reach the desired input channel.

The track is now set to receive input from the selected source and channel.

Input source	Input channel	Use
STM	1A-4D	For live recording (using STM inputs)
TRK	1-16 tracks	To bounce DTD tracks.
OUT	1-16 outputs	To bounce cuellists.
DIG	1 or 2	For digital transfer.